

Translation

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PATENT COOPERATION TREATY

PCT/JP2003/011386



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70) Rec'd PCT/PTO 23 JUN 2005

Applicant's or agent's file reference 03-F-061PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/011386	International filing date (day/month/year) 05 September 2003 (05.09.2003)	Priority date (day/month/year) 05 September 2002 (05.09.2002)
International Patent Classification (IPC) or national classification and IPC B82B 1/00, 3/00, G01N 37/00, C01B 37/02, B01J 19/00		
Applicant TOKYO UNIVERSITY OF PHARMACY AND LIFE SCIENCE		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☐ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 09 April 2004 (09.04.2004)	Date of completion of this report 13 December 2004 (13.12.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/JP 03/11386

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3-6, 10, 11	YES
	Claims	1, 2, 7-9	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Document 1: JP 2000-226572 A (Canon Inc.), 15 August 2000

Document 2: JP 11-106324 A (Shiseido Co., Ltd.), 20 April 1999

Document 3: JP 2002-241124 A (NGK Insulators Ltd.), 28 August 2002

Claims 1, 2, and 7 to 9

Claims 1, 2, and 7 to 9 lack novelty and do not involve an inventive step in the light of document 1 cited in the international search report.

Document 1 discloses a technique wherein a porous silica having a surfactant micelle as a matrix is made to support a functional molecule, characterized in that the aforementioned surfactant is not removed, and the hydrophobic portion of the aforementioned surfactant is used (see especially paragraph [0019]).

Claim 3

Claim 3 does not involve an inventive step in the light of document 1 and document 2 cited in the international search report.

Document 2 discloses a technique wherein a chelating agent is held in the pores of a porous silica having a

surfactant micelle as a matrix (see especially paragraph [0063]).

Claims 4 to 6, 10, and 11

Claims 4 to 6, 10, and 11 do not involve an inventive step in the light of document 1 and newly cited document 3.

Document 3 discloses a feature pertaining to a porous silica having a surfactant micelle as a matrix, wherein the surfaces of the mesopores are subjected to a hydrophobic property-increasing treatment in order to improve structural stability (see especially paragraph [0008]).

Documents 1 and 3 disclose the same feature of using the mesopores of a porous silica having a surfactant micelle as a matrix, and both address the common problem of maintaining the stability of the mesopores; thus, a person skilled in the art could easily conceive of adapting the invention disclosed in document 1 by subjecting the surface of the mesopores to a hydrophobic property-increasing treatment, as disclosed in document 3.